What is claimed is:

1. An optical fiber cable comprising:

an inner layer of strength members;

an outer layer of strength members; and

at least one tube containing at least one optical fiber incorporated into said outer layer.

2. An optical fiber cable according to claim 1, wherein said at least one tube is formed from stainless steel and has an internal gel and said optical fiber is surrounded by said gel and floats within said gel.

3. An optical fiber cable according to claim 1, wherein each of said strength members in said outer layer have an outer diameter and said at least one tube has an outer diameter equal to said outer diameter of said strength members.

4. An optical fiber cable according to claim 1, wherein at least one tube has an outer diameter smaller than said outer

diameter of said strength members, and said tube diameter is increased to said strength member diameter with a polymer layer.

5. An optical fiber cable according to claim 1, further comprising Bragg grating sensors spaced along a length of said optical fiber cable.

6. An optical fiber cable according to claim 1, further comprising a plurality of tubes containing optical fibers incorporated into said outer layer.

7. An optical fiber cable according to claim 1, further comprising a first jacket surrounding said inner layer and a second jacket surrounding said outer layer.

8. An optical fiber cable according to claim 7, further comprising each of said first and second jackets being formed from a plastic material.

9. A system for determining a velocity profile of sound in a medium comprising:

an optical fiber cable suspended in the medium, the optical fiber cable having an inner layer of strength members,

an outer layer of strength members, and at least one tube containing at least one optical fiber incorporated into the outer layer;

said at least one optical fiber having a plurality of Bragg grating sensors spaced along its length;

an optical pulse generator for sending an optical pulse into the optical cable;

an acoustic pulse generator for sending an acoustic pulse generally along the length of the optical fiber cable, the acoustic pulse causing local strain in the optical cable, the local strain causing the Bragg grating sensors in the vicinity of the strain to selectively reflect the optical pulse back in the direction of the optical pulse generator;

a timer for receiving the reflected optical pulse and measuring a time of arrival of the reflected optical pulse; and

a processor for computing the sound velocity profile as a function of the time of arrival.

10. A system according to claim 9, wherein the acoustic pulse generator is a transducer array.

11. A system according to claim 9, wherein the transducer array is a steerable array for accurately directing the acoustic pulse along the length of the optical fiber.

12. A system according to claim 9, wherein the optical pulse generator is a pulsed laser.

13. A system according to claim 9, further comprising a platform for suspending the optical cable and for housing the acoustic pulse generator.

14. A system according to claim 13, further comprising a weighted body attached at an end of the optical fiber cable opposite the platform, the weighted body assisting in extending the optical fiber cable from the platform.